setting the bin value to the new bin value when the new bin value is less than or equal to the bin value; and

setting the bin value to a filtered value when the new bin value is greater than the old bin value.

Cont'd a5

48. The apparatus of claim 47 wherein the filtered value is calculated by:

Filtered Value = (New Bin Value – Old Bin Value)*K + Old Bin Value

Where K is a filtering coefficient.

49. The apparatus of claim 48 wherein the filtering coefficient (K) is calculated by:

K = 1 – (Threshold) (1/t*Ffs)

Where t is a required response time, the Threshold is the fractional value of the target magnitude for which the time value is calibrated, and Ffs is the frame sample rate.

50. The apparatus of claim 49 wherein the time varies according to the frequency value of the frequency bin under consideration.

REMARKS

These amendments were made in order to clarify the scope of the claimed invention. No office action has been received. These amendments were, therefore, not made for reasons relating to patentability.

Should the Examiner have any questions or comments regarding the amendment, the Examiner is invited to telephone the undersigned at the number listed below.

Attorney Docket No. 29236.4
Serial No. 09/658,538

Respectfully submitted,

Bill Naifeh

Bill R. Naifeh
Registration No. 44,962

Date: April 27, 2001

HAYNES AND BOONE, LLP
901 Main Street, Suite 3100
Dallas, Texas 75202-3789
Telephone: 214/651-5706
Facsimile: 214/651-5940
File: 29236.4

D-828787.5

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner For Patents, Washington, D.C. 20231

on April 27, 2001

Fran Ideker

Fran Ideker

RE-WRITTEN SPECIFICATION PARAGRAPHS MARKED UP TO SHOW ALL CHANGES PURSUANT TO 37 C.F.R. 1.121

Replacement Paragraph for the Second Full Paragraph of Page 8 of the Specification:

Figs. 12a and 12b can be used to illustrate the function of a FFT. Fig. 12a is a plot showing magnitude of an analog sinusoidal signal 1202 of fixed frequency plotted against time (i.e., in the time domain). The analog signal 1202 can be converted to a digital signal by the ADC 104, which samples the signal at discrete instances in time (along the x-axis) with a fixed internal 1206 between the samples. Such samples are represented in Fig. 12a as number vertical lines 1204. The samples may then be converted into the frequency domain by means of the FFT to determine the frequency components of the signal in a discrete manner. For simplicity, the signal 1202 is shown sampled at an interval 1206 that provides 16 sample points per time segment, or FFT frame. The preferable number of sample points is a number that is a power of two. The greater the sample points per segment, the greater the discrimination and filtering capability. <u>One embodiment of the</u> [The] present invention uses 4096 sample points per time segment.

RE-WRITTEN CLAIMS MARKED UP TO SHOW ALL CHANGES PURSUANT TO 37 C.F.R. 1.121

1. A method of eliminating acoustical feedback in a system comprising:
determining at least one parameter for at least one notch filter[~~,~~];
adjusting the at least one notch filter based on the at least one parameter[~~,~~];
processing acoustic signals through the at least one notch filter[~~,~~];
testing an effect of the at least one notch filter in the system[~~, and removing the~~] by determining the amount of reduction in amplitude of a frequency being tested; and
removing the at least one notch filter if the [~~effect is less than a~~] amplitude of the frequency being tested has not been reduced by at least the predetermined value.

2. The method of claim 1 wherein the determining step comprises:
converting the acoustic signals by a [~~Fourier~~] transform algorithm into at least one frequency spectrum comprising a plurality of frequency bins[~~,~~];
selecting at least one frequency bin to be a candidate frequency bin[~~,~~];
discriminating the candidate frequency bin to determine if the candidate frequency bin indicates acoustic feedback[~~,~~]; and
determining at least one notch filter parameter based on the candidate frequency bin.

6. The method of claim 1 wherein the adjusting step comprises:
setting the at least one notch filter to a candidate frequency[~~,~~];
setting the at least one notch filter to a bandwidth [~~based on~~] surrounding the candidate frequency, and
setting the notch filter to a predetermined notch depth.